

# A Phenomenological Study of the EC Process from the Perspective of EC Entrepreneurs

David Paper<sup>#1</sup>, Eric Pedersen<sup>#2</sup>, Ruey-Dang Chang<sup>#3</sup>

<sup>#</sup>MIS Department, Utah State University, USA

Center of Excellence for Computer Graphics, Dixie State College of Utah, USA

Department of Accounting, National Chung Hsing University, Taiwan

<sup>1</sup>david.paper@usu.edu; <sup>2</sup>pedersen@dixie.edu; <sup>3</sup>rchang@dragon.nchu.edu.tw (corresponding author)

**Abstract-** The purpose of this study is to explore the use of a strategic process model by successful electronic commerce (EC) entrepreneurs of small and medium sized enterprises (SME) and articulate the components and interrelationships of such a model to readers. Exploration adhered to the qualitative tradition of phenomenology is employed to document the particulars of the study. Results revealed that EC entrepreneurs guide their business efforts with a systematic and strategic process model. A rich description of the model is documented including emergent themes, theme interrelationships, and process flow. Original themes and their inter-relationships were identified and explored through an iterative data coding process. This process included deep and iterative perusal of data transcripts as well as additional data collection to validate themes, remove inconsistent or redundant themes, and deepen our understanding of theme relationships.

**Keywords-** *Electronic commerce (EC); Small and medium sized enterprises (SME); Strategic EC process model; Rich description; Emic perspective*

## I. INTRODUCTION

Electronic commerce (EC) consists primarily of the distributing, buying, selling, marketing, and servicing of products or services over electronic systems such as the Internet and other computer networks [44]. Adult Internet penetration has now reached 73% for all American adults [30] and forecasts through 2010 show robust penetration growth worldwide. The deep penetration of the Internet has provided a vehicle to enable EC to flourish, especially for the entrepreneur. The reason is that entrepreneurs face low barriers to entry and relatively low entry costs when forming an EC business [31]. However, EC entrepreneurialism is a relatively new phenomenon in the new economy and it poses new questions about strategic processes, competitive environments, technology use, entrepreneurial skill requirements, among other things [18].

The purpose of this study is to explore whether or not successful EC entrepreneurs of small and medium sized enterprises, or SMEs, use a guiding strategic process model, and if they do, ask them to articulate the model components and their interrelationships. Additionally, we explore whether or not a comprehensive strategic model can be built from their experiences. For the purposes of this study, a guiding strategic process model contains the elements of EC that are highly important, integral, and essential relative to a plan of action or approach. To systematically learn from successful entrepreneurs in a rich and in-depth manner, we adopted a qualitative research tradition, namely phenomenology. Consistent with the principles of phenomenology, data were collected mainly through face-to-face interviews with 15 successful EC entrepreneurs. What we learned from the data was validated by respondents with follow-up interviews.

Results of our research revealed that EC entrepreneurs actually use a systematic and strategic EC process model to guide their business efforts. We also learned that this model is based on the EC (and general) business experiences of our respondents. A rich description of the EC process model presented in our research emerged from deep analysis of the data collected from respondents. Reaching an 'emic' perspective from our respondents allowed us to distill and validate the EC process themes (elements) as well as key inter-relationships of said process themes (elements) to create a generally agreed upon strategic EC process model. Emergent themes included (a) utilization of the EC process, (b) process inter-relationships, (c) fundamental knowledge, skills, and abilities, (d) opportunity assessment, (e) market research, (f) competitive assessment, (g) strategy development, (h) financial development, (i) risk assessment, (j) technical development, (k) web review, (l) technical management, (m) launch and implementation, and (n) on-going innovation. Original themes and their inter-relationships were identified and explored through an iterative data coding process. This process included deep and iterative perusal of data transcripts as well as additional data collection to validate themes, remove inconsistent or redundant themes, and deepen our understanding of theme relationships.

## II. THEORETICAL FRAMEWORK

In the past decade the Internet has experienced robust growth. The phenomenal growth of the Internet since the mid-1990s has fostered an explosion of electronic business on the Web known as EC [26]. EC is simply defined as doing business electronically [19]. For the purposes of this study, we define EC as doing business electronically via the Internet including buying, selling, distributing, marketing, and servicing of products or services. The Internet is defined as a worldwide network of networks [38].

The Internet has grown from a few thousand people in 1993 to over 150 million in 1999, and is expected to grow to over a billion by 2004 and 1.5 billion by 2007 [3]. Forecasts have estimated that the total value of worldwide EC will exceed \$400 billion by the year 2010. However, hundreds of Internet companies have gone out of business in the past few years, causing tens of thousands of lost jobs and billions of squandered dollars in investment capital [27]. The failure of 'dot-coms' was a staggering 75% in the first two years [27]. Many of these failures were small and medium-sized enterprises (SMEs) [1]. One of the most commonly cited reasons for failure has been lack of a workable strategic business model to guide EC efforts [17, 29].

From a thorough perusal of the literature, we found that many EC businesses had failed but little concrete remediation or advice was given for failure. We did find that a commonly

cited reason for failure was lack of a workable strategic business model to guide EC efforts, but no models were present. That is, the literature agrees that EC failures may be exacerbated by the lack of a 'model' to guide entrepreneurs' EC efforts, but no one has created such a model. We thereby are confident that this research is a definite contribution to the literature in that it offers a systematically and rigorously derived strategic process model grounded in data. The phenomenological tradition offers the necessary methodology to ground our model in data through rich description. Rich description refers to thorough descriptions or details of a phenomenon that create verisimilitude and produce in the reader feelings that he or she has experienced the events described [3]. Once a rich description of the components and interrelationships emerged, our synthesis of the data turned to the benefits of an EC process model as a guiding mechanism. Consistent with the literature, we believe that if entrepreneurs had access to and used such a process model, their EC initiatives might fail less frequently.

The literature on EC that situates our study is presented in two parts. First, we summarize the existing literature dealing with EC adoption by SMEs since the focus of our study is on small business success and failure on the Internet. Our respondents are entrepreneurs that realized the potential of the Internet for business. Second, we summarize the existing literature dealing with the EC process in general. We were unable to find any literature on the subject that dealt exclusively with SMEs, so we present the general literature on this topic.

#### A. *EC Adoption by SMEs*

Dewan et al. (2000) argues that EC technologies have significantly reduced sellers' costs of collecting buyer preference information and managing multiple prices. Online sellers can now offer custom products at discriminatory prices. Further, EC technologies offer significant advantages to early adopters who gain market share and profits at the expense of the conventional seller. Srinivasan et al. [37] suggest that differences in EC adoption among firms can be attributed to a sense-and-respond capability (the authors term this concept as technological opportunism) of firms with respect to new technologies. Antecedent actions that promote adoption include focusing on the future, top management advocacy of new technologies in general, and moving toward an adhocracy culture from a hierarchy culture.

Although all organizations that adopt EC share certain experiences, smaller organizations have unique challenges. With the almost ubiquitous availability of the Internet and low entry costs, smaller organizations can compete more easily online [12, 31]. However, a limited number of studies have sought to measure the level of EC adoption [43] or other IT adoption in SMEs [35]. Weiss [42] and Ruth [34] suggested that smaller organizations are less likely to adopt EC than larger ones. The reasons most cited were lack of resources, expertise, and experience with technology. Cragg and King [5] discovered that the strongest inhibitors to adoption for small firms were lack of information systems (IS) knowledge, lack of managerial time, poor support, and limited financial resources. Ruth [34] surveyed EC activity of small companies in New Jersey and found that they were hesitant about adopting EC because they were unsure of what it would take to be successful in such a venue. Wang's model [41] suggested that firms, specifically travel organizations, are pressured by IT resource demands, financial strength issues, competitive

pressures, and the CEO's orientation toward innovation, and that all of these influence e-business adoption. However, the recent and dramatic drop in hardware prices, the low entry barriers of the Internet, and the availability of user-friendly small business applications are allowing more SMEs to successfully compete on the Internet [16].

Daniels et al. [10] suggested that adoption of EC by SMEs proceeds in a set of sequential stages and that the stage of adoption depends on a set of contextual variables both at an industrial and organizational level. Their positions were supported by their empirical study. Similar to adoption, it was found that small firms gain experience and knowledge in a sequence of steps or stages [33]. Achievement of the first stage of a project allows the organization to gain experience that can then be used to move on to the next stage of development. The process of going from one stage to the next enables the organization to gain even further experience and knowledge. Stage models are common in technology-based fields of new ventures [21].

#### B. *The EC Process*

The reason why firms of any kind succeed or fail is inextricably tied to strategy [32]. "Strategy encompasses all the major activities undertaken in the strategy process and should focus practitioners and scholars alike on what's important" [28, p. 7]. That is, strategy is what drives the amount and nature of corporate success. Without strategy there is no rationale for how one will achieve one's purposes [2]. Since strategy is so important, it should be systematically derived [39].

Although EC research is proliferating, it lacks a cogent framework or model to guide research efforts. Dai and Kauffman [8] analyze and synthesize others research for insights into the B2B electronic markets, specifically EC transactions within B2B markets. The Dai and Kauffman [8] model focuses on building a comprehensive understanding of EC transactions but lacks a broader perspective of the elements involved in an EC framework or process model. Kauffman and Walden [20] apply economic analysis to EC organizations in a macro approach to technology, processes, products, and markets. Their research focuses on understanding developments and directions in EC research. It builds a framework of research that has been conducted and outlines research that needs to be done in order to fill in fundamental gaps in the knowledge base of EC. Zwass [45] looks at EC and organizational innovation and covers critical domains, such as commerce, collaboration, communication, connection, and computation, wherein innovation may occur within the organization. The conceptual framework presented is limited to these primary areas. As such, it excludes significant elements of the EC process. Wade's [40] research deals with measuring EC operations and organizational performance and focuses on a comprehensive system of measuring EC performance. Performance measurements in the study go beyond traditional financial performance measures, such as return on investment or return on equity because these measures omit critical social and environmental success measures. The Fodor and Werthner [15] model focuses on SME's and the process of exchanging data through online transaction technology. They look at B2C EC in the travel industry as well as the opportunity to improve technology use and data exchange between vendor organizations and B2C transactions. Fodor's research covers a niche market for B2C EC (namely travel) and focuses on the interoperability of data within that niche. Their research also suggests there is a 'weak link' between real world data links

and travel industry vendors or B2B applications. The Delone and McLean [9] model measures success in EC and information systems. Their research involves time-tested variables commonly associated with EC and IT that are linked to success within an organization. Benefits of EC investments and its effect on business operations are also explored. The Laperche [22] model focuses exclusively on the type of actors involved in EC and the chain of creation and circulation of information. The Fahey et al. [14] model focuses on the business processes, assets, strategy, rivals (competition), and customer solutions. Both the Laperche and Fahey et al. models focus on important aspects of the EC strategic process but are not comprehensive. Bridge and Peel [4] focus on the strategic behavior of SMEs. They explore the association between strategic planning, computer use, and types of business applications. However, their study is a one-time cross-sectional piece that only looks at whether there is a relationship between strategy and computer use. They do not discuss the strategic process of SMEs specifically.

Although the concept of strategy is discussed in the literature, nothing specific exists regarding a strategic process intended to guide EC SMEs toward success. We believe that the technical aspects of EC provide unique challenges to establishing an effective SME strategic process model. We thus embarked on this experiential study of EC SMEs to develop a preliminary model of the strategic process components and their interrelationships.

### III. RESEARCH METHODS

In the tradition of Morse and Field [25], we follow the edicts of phenomenology since our goal is to understand the lived experiences of individuals and their intentions within their 'life world'. With phenomenology the researcher asks, 'What is it like to have a certain experience?' Phenomenology is therefore the study of phenomena [25]. The interview respondents and interview instrument are now discussed.

#### A. Interview Respondents

Consistent with Dexter [11] and Merriam [24], we wanted to find out what's in and on the mind of successful EC entrepreneurs. As such, we interviewed 15 successful EC entrepreneurs. Selection of the respondents was based on careful adherence to phenomenological principles.

"Collecting data through interviews involves, first of all, determining whom to interview" [24, p.71]. We selected our interview pool by identifying entrepreneurs who have real world experience in EC, who are 'successful' in conducting EC, and who we can readily access for interviewing purposes. The definition of 'successful' for this study is *a solvent EC business that has generated profits for at least 12 months*. Profitability is defined as *when revenues exceed expenses on a monthly basis*. From our experiences, an EC company achieves profitability by following some process or path aimed at attaining a specified level of profitability and, per our definition, success. And, it is the path or process used by successful EC entrepreneurs that we are interested in studying. Additionally, participants in the study stated that they experienced success after operating their business for a period of time as well as reaching profitability. It is noteworthy that the participants' view of success is continual operation and profitability over a period of time, which is consistent with our definition of success.

Creswell [6] reminds us that the key factor for participant

selection is that all participants have experienced the phenomenon under investigation. The participants selected for interviews all had extensive experience in the process of SME [Small to Medium sized Enterprises] EC. The 15 interview participants in this study are regionally accessible, meaning each of the interview participants live within a 500 mile geographic radius of St. George, Utah. All 15 respondents are conducting EC via the Internet with a broad representation of customers that reach from Alaska to Argentina and from California to China. Customers of the respondents are worldwide. Industries represented include travel, healthcare, search, technology, retail, B2B, B2C, real estate, sports, services, products, advertising, and management. Most importantly, all respondents have experienced the phenomena of successful EC. Each of the fifteen respondents was assigned a code (from P1 to P15) to ensure a high level of confidentiality.

#### B. Interview Instrument

Interview questions were, consistent with Merriam's description of the interview structure continuum, semi-structured, meaning they were "a mix of more- and less-structured interview questions" [24, p.73]. A semi-structured format allows "the researcher to respond to the situation at hand, to the emerging worldview of the respondent, and to the new ideas on the topic" [24, p. 74]. The following lists the semi-structured interview questions:

- From start to finish (or beginning to end), describe the approach you use or steps you take when launching an EC initiative (company).
- How do these steps relate to each other? Where in the process do these steps come – do we need to change the position or order of the steps (show notes taken)?
- What types of problems or issues have you experienced when launching an EC initiative? What was the reason for the problem(s)?
- What specific skills and abilities must one have to successfully launch an EC company?
- What specific steps or approaches have you used that have made you successful? Are there steps in the process that you consider essential or non-essential?
- Have you experienced EC initiatives that have failed or have not met up to your expectations for success?
- If you have launched more than one successful EC initiative, what specific approaches or methods have you used that were common to both?
- In their sequential order, meaning from first to last, please describe all the steps or EC elements we have just discussed (repeat of question #2 clarifying the order of the steps and that all the steps which have been included).
- What specific suggestions would you have for someone thinking about starting an EC company?
- Do you have additional comments relating to EC?

Each interview lasted between 1.0 and 1.5 hours. Consistent with Spradley [36, p.64], audiotapes were transcribed within 48 hours of the interview (but final transcription editing and proofreading ended in 7 days) to reduce data loss. Consistent with Creswell [6], a set of open-ended questions [see above] were brought to the interview

sessions, but respondents were encouraged to talk about their interests, ideas, and feelings about EC. They were also encouraged to openly discuss the EC process.

### C. Data Analysis

Before analyzing the qualitative data we collected, we first discuss researcher bias. Researcher bias is an issue in any type of research, but in qualitative research it is a crucial one. Confronting researcher bias is critical in phenomenological studies because “the researcher is the primary instrument for data collection and analysis” [23, p. 7]. Researchers naturally bring biases with them as part of who they are and their experiences in life, but if the researchers directly confront their biases through techniques such as bracketing, any detrimental impact to the research are drastically reduced [7].

One effective way to mitigate researcher bias in a phenomenological study is to use a bracketing interview. Consistent with deMarrias and Lapan [7], a bracketing interview is designed to “make you, as researcher, aware of your presuppositions you bring to your research and the perspectives your own experience provides” (p. 115). A summary of the bracketing interview with Joe Peterson (Vice President at Dixie State College) follows:

The researchers have clear biases that result from history of involvement with the topic. They are clearly enthusiastic and wholehearted in their positive attitudes about e-commerce. However, they demonstrate an ability to recognize those biases and to compensate for them in their research. I see evidence that they carefully reflect and think about the researcher-participant relationship, and I don't see evidence that they assume a defensive posture or develop pre-determined goals for their research.

We now turn to the coding of the emergent themes from the data. Coding was conducted in two phases. In the first phase, the themes that emerged from careful perusal of the transcripts were the stages of the EC process. Although phase one revealed that there were eleven EC process stages, we had no codes relating to the sequencing and interrelationships of them. In the second phase, we once again explored the data to place the stages into context. That is, we wanted to find out how respondents classified the sequencing and interrelationships of the stages.

### D. Emergent Themes

The themes emerged from the data after hundreds of hours of (a) conducting interviews with participants, (b) transcribing interviews, (c) thinking and reflecting about the interviews, (d) continuously reviewing transcriptions, and (e) a natural progression of thought gained from the participants' experiences, thoughts, feelings, insights, and successes. To initially reduce the multitude of raw (un-coded) snippets of information emergent from the data into comprehensible chunks, we created process stage subtopics as containers for like ideas and concepts. Once all of the raw themes were contained, we chunked the subtopic containers into identifiable EC process stages that became our initial codes. That is, grouping the raw themes allowed us to create the subtopics, and each subtopic was then grouped into a code.

Through the process of chunking, the first consolidated themes that emerged from the data were the EC process stages. Each EC process stage was given a two-character code with the exception of the fundamental knowledge, skills, and abilities theme that was assigned a three-character code of KSA. The codes that represent the EC process stages include:

- KSA (Fundamental Knowledge, Skills, and Abilities)
- OA (Opportunity Assessment)
- MR (Market Research)
- CA (Competitive Assessment)
- SD (Strategy Development)
- FD (Financial Development)
- RA (Risk Assessment)
- TD (Technical Development)
- WR (Web Review)
- TM (Technical Management)
- LI (Launch and Implementation)
- OI (Ongoing Innovation)

To develop a contextual grounding for the emergent themes (EC process stages), we re-explored the interview transcripts. Emergent from this activity were themes relating to the use and sequence of the stage themes as well as the interrelationships between the stages. Emergent themes that represent the use, sequence, and interrelationships were classified into two codes:

- SP (Utilization of E-Commerce Process)
- PI (Process Inter-relationships)

### E. Theme Analysis

We created a table for each of the stage codes for two reasons. First, we wanted to present in tabular form the raw (un-coded) themes, container subtopics, and process stages (coded themes) that emerged from the data. Second, we wanted to show how the respondents corroborated our coding scheme. Tables for each stage include subtopics, associated raw (un-coded) themes, and corroboration by respondents (P1– P15). Table I is presented next.

TABLE I. KSA PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
Technical understanding of entrepreneur	<ul style="list-style-type: none"> <li>• Should have both business and technical skills (P1, P2, P6, P15)</li> <li>• Should go through entire EC Process for startup (P7, P11)</li> <li>• Has passion for their technology and market niche (P1, P2)</li> </ul>
Business and IT developer	<ul style="list-style-type: none"> <li>• Natural chasm between business &amp; technical experts (P1, P2, P11)</li> <li>• Relationships important in launching a new business (P1, P6, P8, P10, P11, P15)</li> </ul>
Entrepreneur understanding of how to use the Internet	<ul style="list-style-type: none"> <li>• Entrepreneurs who don't understand the use of the Internet are like architects trying to build a home without a foundation, and are doomed to fail unless they acquire the needed expertise (P15)</li> </ul>
Fundamental EC technical skills of entrepreneur	<ul style="list-style-type: none"> <li>• Entrepreneurs who have no fundamental EC technical skills will fail unless they acquire or outsource the required expertise (P15)</li> </ul>
Need for ongoing innovation	<ul style="list-style-type: none"> <li>• Can expect an IT upheaval every 18 months (which is a major reason for high mortality rate in high-tech businesses) (P10, P15)</li> <li>• Diversification, flexibility and adaptability are key principles in managing explosive business situations (P13, P14)</li> <li>• Should retain initial profits for future technology growth and obsolescence (P10, P13)</li> </ul>

Areas to strengthen	<ul style="list-style-type: none"> <li>IT team must have business, management, market, technical, financial, sales, and applicable expertise to the start-up (P10, P15)</li> <li>Must possess technical, marketing, sales, financial, business and management expertise to create a distinct advantages over the competition (P6, P10, P11, P13, P15)</li> <li>Partnering and outsourcing are viable alternatives to meet missing technical skills internal to the team (P5, P11, P15)</li> </ul>
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Table I presents the raw un-coded themes and subtopic containers for the KSA (knowledge, skills, and abilities) code. For every code, respondents (P1-P15) that contributed to a raw theme are indicated in parentheses. As such, every code or subtopic can be traced back to a specific participant extract (or paraphrase) from the transcripts. For instance, the first subtopic container for KSA is 'Technical Understanding of Entrepreneur'. The raw un-coded data that allowed us to create this subtopic consisted of three emergent concepts – EC entrepreneurs 'Should have both business and technical skills', 'Should go through entire EC process for startup', and 'Has passion for their technology and market niche'. Notice that extracts from respondents P1, P2, P6, and P15 allowed us to create and corroborate the first concept. The second concept was extracted from the transcripts of participants P7 and P11. The third concept was extracted from the transcripts of P1 and P2.

The KSA code reflects that a successful EC entrepreneur must possess both business and technical skills, an understanding of the entire EC process before starting a new business, and a passion for the technology and chosen market niche. Moreover, she must be flexible enough to adapt to radical IT changes. She must employ a team with well rounded business and technical skills to effectively compete or at least be able to partner or outsource to acquire such skills.

TABLE II. OA PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
Opportunity Identification	<ul style="list-style-type: none"> <li>Opportunities may be lost if unwilling to dedicate the necessary time and resources required for full preliminary evaluation (P15)</li> <li>Build a business that is worth selling, not a practice that goes away when the entrepreneur leaves (P1, P12)</li> <li>Make sure product is what customer wants (P1, P9, P10)</li> <li>Think big, but be conservative (but not too narrow minded or with tunnel vision; get the big picture and be positive) (P1, P3)</li> </ul>
Identifying a real opportunity	<ul style="list-style-type: none"> <li>Determine what is real and not (Can we do it? Do we have the resources to do it? Can we make a profit?) (P7, P9, P11)</li> <li>Opportunity is real if can implement with little or no risk and financing, and make a profit (P10, P13, P35, P36)</li> </ul>
Matching opportunity with strategic business plan	<ul style="list-style-type: none"> <li>Plan specific enough to guide opportunities within niche markets given right expertise, technical capabilities, and a competitive advantage (P3, P4, P10, P13, P14)</li> </ul>
Sufficient Resources	<ul style="list-style-type: none"> <li>Must have business, management, market, technical, financial, sales, and all other forms of expertise applicable to the start-up (P3, P4, P10, P15)</li> <li>Marketing is critical to success (P10, P14)</li> </ul>

Make a profit	<ul style="list-style-type: none"> <li>Must be able to determine startup and overhead costs as well as anticipate generated revenues (P3, P13)</li> </ul>
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Table II presents the raw un-coded themes and subtopic containers for the OA (opportunity assessment) code. The OA code reflects that an opportunity should be fully assessed ahead of time, but requires time and resources to properly do so. Moreover, a worthwhile opportunity must provide what the customer wants, generate a profit, and match the expertise of the team built by the entrepreneur to run her business. Finally, an opportunity should be evaluated deeply enough to estimate costs, expenses, and revenues with a high degree of accuracy.

TABLE III. MR PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
Market strategy	<ul style="list-style-type: none"> <li>Look online to determine what you want to do, image you want to portray, and markets you want to target (P4, P5, P6, P7, P10, P13)</li> <li>If a lot of competitors, very difficult to create something unique or different (P2, P8, P12)</li> </ul>
Market research	<ul style="list-style-type: none"> <li>Look at target markets, demographics, niches, and opportunities (P3, P10, P13, P14, P15)</li> <li>Due diligence on product or service you evaluate (P2, P3)</li> </ul>
Customer values	<ul style="list-style-type: none"> <li>Can we create a preferred user experience? (P6, P7)</li> <li>Seek those who will scrutinize product/service and Web site realistically (P1, P10)</li> <li>Make sure product/service is right and customer really wants it (P1, P11, P14)</li> </ul>
Market size	<ul style="list-style-type: none"> <li>Look for trends in specific markets (P1, P2, P3, P4, P8)</li> <li>Look at the target markets and demographics of those markets (P3, P6, P10, P7)</li> <li>Do all the due diligence on any product or service you are evaluating (P3, P15)</li> </ul>
Customer profiles	<ul style="list-style-type: none"> <li>Determine specific customer profiles (P3, P10, P14, P15)</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>Expert market personnel may not understand technical side of business (P2, P11, P15)</li> <li>Technical experts may not understand market side of business (P2, P5, P7, P9)</li> <li>Natural chasm between marketing and technical developers. Executives must understand and manage this chasm carefully and realistically if corporate cost, schedule, and performance needs are to be met (P1, P2, P11)</li> <li>Most development projects have technical obstacles and problems that make realistic cost, schedule, and performance requirements difficult to meet (P1, P10, P11, P13, P15)</li> <li>Business people know dollars. Techies know code, and want to make it perfect. Executives need to bring balance (P2, P13, P14)</li> <li>Market and technical personnel must develop common, practical, and realistic implementation goals if the project is to succeed (P10, P11, P12)</li> <li>Enterprises with technical, marketing, sales, financial and management expertise internal to the corporation have distinct advantages over those who are lacking in one or more of these skill areas (P6, P10, P11, P13, P15)</li> <li>Sweat equity allows an entrepreneur to develop and prove the technology before startup, minimizing the need for startup capital and eliminating technology development risks, including cost and schedule over runs (P4, P8, P10)</li> </ul>

Table III presents the raw un-coded themes and subtopic containers for the MR (market research) code. The MR code reflects the vital importance of online marketing competency. One major difference between online and brick and mortar business is the vast market potential of the Internet. The successful EC entrepreneur must understand that the Internet has a huge customer base that is potentially world-wide. Moreover, product branding, demographics, market niche identification, and customer profiling require people with experience doing business on the Internet. Of course, basic marketing skills are also essential because business on the Internet has many commonalities with traditional brick and mortar business. Another contrast with brick and mortar business is the ability to overcome technical obstacles unique to the Internet. A successful EC entrepreneur also has to create harmony between his business and technical people. ‘Techies’ tend to want great technology without always considering business value. Business people want to make money without always understanding the IT challenges associated with doing business on the Internet. This is another reason that it benefits the EC entrepreneur to have both business and IT skills. ‘Sweat equity’ is another important factor because it motivates people to work harder. Sweat equity is when people contribute time and effort into the business they get rewarded with ownership in the form of stock options. We found through this study that sweat equity is one of the most important contributors to success because people have a stake in the performance of the business.

TABLE IV. CA PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
Identify the competition	<ul style="list-style-type: none"> <li>Identify competitors to know who is in the marketplace (P2, P10, P13)</li> <li>After identifying competitors, can determine market size, market approaches, competitive advantages, etc (P2, P10,P13)</li> </ul>
Competitors' strategy	<ul style="list-style-type: none"> <li>Identify the strategy of competition (P1, P10, P13)</li> <li>Understanding strategy of competition enables development of a strategy with competitive advantages that will attract customers to company's market niche (P1, P10, P13)</li> </ul>
Competitors' strengths	<ul style="list-style-type: none"> <li>Identify strengths of competition in relation to own strengths and weaknesses (P10, P13)</li> <li>Find way to neutralize strengths by offering something better, faster, or unique (P10, P13)</li> </ul>
Competitors' weaknesses	<ul style="list-style-type: none"> <li>Identify weaknesses of competition in relation to own strengths and weaknesses (P10, P13)</li> <li>Highlight our strengths where competition is weak (to expose weaknesses of competition) (P2, P5, P7, P10, P13)</li> </ul>
Dealing with competitors' strengths	<ul style="list-style-type: none"> <li>If competitor's strength cannot be neutralized, assess potential to even penetrate market, consider a lesser market share or look at a new opportunity (P7, P10, P13)</li> </ul>
Entrepreneur's strengths and weaknesses	<ul style="list-style-type: none"> <li>Accentuate product or delivery strengths (P4, P10, P13)</li> <li>Mitigate (or negate) product or delivery weaknesses (P3, P5, P6)</li> </ul>
Entrepreneur's competitive advantage	<ul style="list-style-type: none"> <li>Superior technology to competitor can be competitive advantage (P1, P3, P10, P11, P14)</li> <li>New technology that currently does not exist is a competitive advantage (P3, P11)</li> <li>Good external relationships offer potential competitive advantages (P1, P3, P6, P8, P10, P11, P13, P14, P15)</li> <li>Unique, state-of-the-art technology is a competitive advantage (P3, P10, P13)</li> </ul>

	<ul style="list-style-type: none"> <li>Technology-driven, unique corporate management systems offer potential competitive advantages (for productivity reasons) (P2, P8, P10, P13)</li> <li>Internal technical, marketing, sales, financial, business and management expertise tend to have distinct competitive advantages (P6, P10, P11, P13, P15)</li> <li>Partnering and outsourcing are viable alternatives to missing internal technical skills, but generally weakens the competitive advantage (P5, P11, P15)</li> <li>First in the market ((P3, P13)</li> <li>Offer a preferred user experience (P6, P7)</li> <li>First in innovation (P3, P5, P6)</li> <li>Quality service may be a prime competitive advantage (P8, P13)</li> </ul>
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Table IV presents the raw un-coded themes and subtopic containers for the CA (competitive assessment) code. The CA code reflects the vital importance of understanding the competition. First, identify the competition to better determine the size of the market, marketing approaches, and potential competitive advantages. Second, identify the strategies of the competition. Once identified, the entrepreneur can develop a unique strategy to attract customers. Third, identify competitors' strengths and weaknesses so that the entrepreneur can compare them to her strengths and weaknesses. If the competition is too strong in a particular market niche, the entrepreneur may want to consider another market or settle for less market share. Being innovative usually offers a competitive advantage. Moreover, being first to market is an advantage. Excellent customer service is typically a competitive advantage.

TABLE V. SD PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
Assemble the team	<ul style="list-style-type: none"> <li>Teams provide sweat equity in exchange for stock options (P1, P8, P10)</li> <li>Teams that own part of the business minimizing cost startup and risk (P2, P9, P10)</li> <li>Someone needs to know all aspects of the company (P2, P5, P8, P9)</li> <li>Startups typically have very limited resources (P11, P15)</li> <li>Balance marketing and technical perceptions to meet performance needs (P1, P2, P11)</li> <li>Team must have business, management, market, technical, financial, sales, and all other forms of expertise applicable to the start-up (P1, P2, P10, P13, P15)</li> <li>Enterprises that have technical, marketing, sales, financial, business and management expertise internal to the team tend to have distinct advantages (P6, P10, P11, P13, P15)</li> </ul>
Match people's strengths with tasks	<ul style="list-style-type: none"> <li>Match team members' strengths with tasks that contribute to project success (P1, P5)</li> <li>Carefully assess capacity of team (P1, P5)</li> </ul>
Conduct initial risk assessments	<ul style="list-style-type: none"> <li>Risk assessment is ongoing. As risks are identified, must be quantified, tracked, and then mitigated to have low-to-zero startup risk (P10, P13, P15)</li> <li>Unresolved risks can be program busters (P10, P13, P14)</li> </ul>
Develop short-term or startup strategy	<ul style="list-style-type: none"> <li>Everything in the EC Process relates back to corporate strategy (P2, P10, P13, P15)</li> <li>Startup success hinges on strategy, IT development, and risk minimization (P2, P10, P13)</li> <li>Minimize startup risk with sweat equity, partnering or strategic alliances (for equipment</li> </ul>

	<ul style="list-style-type: none"> <li>and/or facilities) to minimize debt, and plan the work and work the plan) (P1, P6, P7)</li> <li>Minimize startup capital (P10, P12) and debt (P4, P6). Zero debt enhances ability of EC companies to withstand sudden market downturns (P2, P9, P10, P11, P12, P13)</li> <li>Keep investors up to date (P10, P13)</li> </ul>
Develop long-term strategy	<ul style="list-style-type: none"> <li>Use zero debt to withstand sudden market downturns (P2, P9, P10, P11, P12, P13)</li> <li>Expand business according to sales growth, operate within available corporate resources, limit profit taking, make wise expansion and critical growth decisions, build the for the long term, retain initial profits for future technology growth or expansion, and retain future profits for eighteen months state of the art technology advances (P2, P10, P13)</li> <li>Build the company for the long term (P10, P13, P52, P53, P54)</li> <li>Understand and adapt to changing markets (this can happen quickly) (P10)</li> <li>When appropriate, sell or merge (P1, P4, P7, P14, P16)</li> <li>Maintain current technology understanding (P15, P27)</li> </ul>
Exit strategy	<ul style="list-style-type: none"> <li>Build a business, not a practice. Build a business that is worth selling, not a practice that goes away when the entrepreneur leaves (P1)</li> <li>When appropriate, sell or merge as defined in the long-term strategy (P1, P4, P7, P14)</li> <li>Work with team and executives before deciding to exit (P3, P5)</li> </ul>

Table V presents the raw un-coded themes and subtopic containers for the SD (strategy development) code. The SD code reflects the critical aspects of strategy development for a successful EC business. The first strategic aspect is building an effective team of people. An important first step is to encourage team members to provide sweat equity in exchange for stock. A sweat equity strategy serves two purposes. First, team member loyalty is high because they build ownership in the business over time. Second, startup costs and risk are minimized. EC startups tend to have very limited resources so this strategy is effective. Risk is minimized because limited resources in people are required at startup and people tend to work much harder when they own part of the business. For a sweat equity strategy to work, the EC entrepreneur or another executive must understand all aspects of the business. Moreover, the team must possess both the business and technical skills necessary for a startup. The second strategic aspect is to build a competent management team. With an EC business, managers must possess the dual skills of leading both technical and business team members given the natural chasm between business and technical people. The third strategic aspect is to understand that startup success relies on leaders with good strategic skills, technical people with deep competence in Internet technologies, and business developers that possess experience in risk minimization. The fourth strategic aspect is to understand that long-term planning and risk minimization is ongoing. The EC entrepreneur must be a competent strategist and realize the role of her team in planning.

TABLE VI. FD PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
Cost analysis and revenue projections	<ul style="list-style-type: none"> <li>Determine startup and monthly overhead costs and anticipated generated revenues (P3)</li> <li>Most successful EC businesses needed on \$10,000 seed money for startup (P1, P2, P12)</li> </ul>

Near term budget projections	<ul style="list-style-type: none"> <li>Without adequate capital, most EC businesses fail in the 1<sup>st</sup> year (P3, P8)</li> </ul>
Return on investment	<ul style="list-style-type: none"> <li>Determine ROI as accurately as possible (P2, P13)</li> <li>Investment of \$10,000 yielded \$40 million in our EC businesses (P4, P7)</li> </ul>
Minimize financial risks	<ul style="list-style-type: none"> <li>Minimize startup capital (P2, P9, P12, P13)</li> <li>Zero debt financing reduces financial risk and is available (P2, P9, P10, P11, P12, P13)</li> <li>Be conservative by expanding relative to sales growth, operating within available resources, limiting profit taking, and retaining profits for future technology growth (P2, P10, P13)</li> <li>Reward with sweat equity rather than paying out from profits (P10, P13, P14, P15)</li> <li>Open source software can help minimize costs (P8, P14, P15)</li> </ul>
Determine equity and/or debt funding	<ul style="list-style-type: none"> <li>Corporate ownership (stock, in the right amount) helps retain key employees and fosters good employee relationships (P4, P9, P15)</li> <li>Look for equity investors who will trade stock for dollars (P2, P6, P7, P12)</li> </ul>
Determine full financed debt or equity	<ul style="list-style-type: none"> <li>The number 1 goal is to not finance through banks (P2, P6)</li> <li>Be open with financial initiatives to obtain more financing opportunities (P4, P10)</li> <li>Relationships and financing are tied together and provide more resources (P4, P10)</li> </ul>
Sweat equity advantages	<ul style="list-style-type: none"> <li>Sweat equity enables start-up with little or no capital (P2, P9, P10, P12, P13)</li> <li>Sweat equity enhances ability to compete in the market place (P2, P9, P10, P12, P13)</li> <li>Sweat equity allows an entrepreneur to develop and prove technology before startup, thus minimizing startup risk in terms of cost, schedule, and performance (P2, P9, P10, P12, P13)</li> </ul>

Table VI presents the raw un-coded themes and subtopic containers for the FD (financial development code). The FD code reflects the critical aspects of financing. First, startup EC businesses rarely need more than \$10,000 in seed money. Second, the team should have savvy business expertise in financial analysis to increase the chances of success by enabling accurate projections of ROI, short and long term budgets, and financial risks. Third, be conservative by expanding when justified by sales growth, operating within available resources, retaining at least some profits for expansion and possible market downturns, and limiting profit taking with sweat equity. Fourth, finance through relationships rather than the banks. That is, build a network of investors by showing what can be accomplished with little or no startup costs. Fifth, use sweat equity to build employee loyalty, minimize risk, and save costs. After all if employees own part of the company, they tend to care more about saving money where possible, improving performance in all aspects of the business, and cutting waste.

Table VII presents the raw un-coded themes and subtopic containers for the RA (risk assessment) code. The RA code reflects the importance of assessing risk in support of a successful EC process. Risk assessment is so important that only strategy and technical development are considered more important. First, risk assessment should be ongoing and considered at each stage of the EC process. Second, risks must be carefully quantified, tracked, and mitigated. Third, debt is the most nefarious element to keep risk to a minimum. Fourth, sweat equity is a critical tool in mitigating risk. Fifth, adopting a zero-to-low risk approach facilitates a smooth startup and

minimizes risk related to high tech failures. However, some entrepreneurs believe that risk offers potential opportunities because many business people are risk-averse. Finally, risk assessment is never over. Once the EC business is successful, risk assessment should be a priority because the high tech market place is never risk-free.

TABLE VII. RA PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
Identify all risk elements	<ul style="list-style-type: none"> <li>• Risk reduction is 3<sup>rd</sup> in importance after strategy and IT development (P2, P10, P13, P15)</li> <li>• Risk assessment is an on-going process and must be considered in each stage of the project. As risks are identified, they must be quantified, tracked, and then mitigated, if the project is to have a low-to-zero risk startup (P3, P4, P10, P13)</li> <li>• Debt can cause failure under significant high-tech market downturns (P10, P12, P13)</li> </ul>
Reduce risk elements to low	<ul style="list-style-type: none"> <li>• Reduce risk elements to zero or low risk (P10, P13)</li> <li>• Zero debt helps business withstand sudden market downturns (P2, P9, P10, P11, P12, P13)</li> <li>• Managing the chasm between marketing and IT developers reduces risk (P1, P2, P11)</li> <li>• Sweat equity allows an entrepreneur to prove a technology before startup, minimizing startup risk in terms of cost, schedule, and performance (P2, P9, P10, P12, P13)</li> <li>• Rainy day funds can reduce failure during sudden high-tech market downturns (P13)</li> <li>• Sweat equity can facilitate start-up with little or no capital by avoiding indebtedness (P2, P9, P10, P12, P13)</li> </ul>
Reactions to low risk	<ul style="list-style-type: none"> <li>• The zero to low risk approach is not universally accepted by all entrepreneurs (P2, P12)</li> <li>• Some believe that risk breeds profits, so elimination of risk might reduce profit potential. By entering into a "risky" venture, an entrepreneur is taking a leap others may be unwilling to take, and entering a market others are overlooking (P1, P2, P12)</li> </ul>
Continuous risk review	<ul style="list-style-type: none"> <li>• Risk assessment should be continuous. That is, management should never be satisfied that risk mitigation is over, especially once success is reached (P2, P9, P12, P13)</li> </ul>

Table VIII presents the raw un-coded themes and subtopic containers for the TD (technical development) code. The TD code reflects the critical importance of technology in a successful EC process. First, technology development is second only to strategy in importance. Second, technical expertise and savvy cannot be overrated because it can offer a significant competitive advantage in the EC industry. Third, software development must follow a systematic process to ensure that a successful IT product is produced. Third, technology management should be very closely tied to business objectives and the people doing the work. Fourth, risk assessment is inextricable tied to technology development. Fifth, IT development time can be reduced by embracing open source and emerging technologies. Finally, unique and superior technology is a definite competitive advantage.

TABLE VIII. TD PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
Technology and business	<ul style="list-style-type: none"> <li>• Technology is second only to strategy in terms of success (P2, P10, P13)</li> <li>• Business people can work with technology people to identify how to be unique, superior, innovative, and quality oriented in terms of development of IT (P1, P2, P10, P11, P12)</li> <li>• Determine Web site needs with business and IT input (P3, P4, P5, P10, P14, P15)</li> </ul>
System development process	<ul style="list-style-type: none"> <li>• Speed of development is key and emerging IT is available to reduce cycle time (P8, P14)</li> <li>• Develop appropriate metrics to assess business value of IT (P1, P3)</li> <li>• Sweat equity is valuable because people that own the business work harder and try to reduce wasteful practices during development (P2, P9, P10, P12, P13)</li> <li>• Expertise in IT and business offers a distinct advantage (P6, JP10, P13, P15)</li> </ul>
Managing IT development	<ul style="list-style-type: none"> <li>• Technical experts tend to ignore marketing and other business aspects, so managers with strong business skills and an understanding of IT are critical (P2, P10, P13)</li> <li>• Keep management concepts and principles simple and practice what you preach. That is, plan your work and then work your plan (P9, P10)</li> <li>• Good communication skills increase productivity (P10, P13)</li> <li>• Good employee relationships can foster success (P13, P14)</li> </ul>
Technology updates	<ul style="list-style-type: none"> <li>• Updates should be handled by following the same EC process used for startup (and the rest of the business) but tailored to the update (P2, P12, P14)</li> </ul>
Uniqueness	<ul style="list-style-type: none"> <li>• IT driven corporate management systems can make a corporation unique (P2, P10, P13)</li> <li>• Superior IT to the competition makes the corporation unique (P1, P3, P10, P11, P14)</li> <li>• New technology that currently does not exist makes the corporation unique (P3, P11)</li> <li>• First in the market is a distinct advantage (P3, P13)</li> <li>• Offering a preferred user experience is a distinct advantage (P6, P7)</li> <li>• First in innovation is a distinct advantage (P3, P6)</li> <li>• Good external relationships can make the corporation unique and thereby offer a competitive advantage (P1, P3, P6, P8, P10, P11, P13, P14, P15)</li> <li>• Quality service can make a corporation unique (P8, P13, P26, P56)</li> </ul>
Integrating systems development and strategy	<ul style="list-style-type: none"> <li>• All aspects of the EC process relate back to corporate strategy (P2, P10, P13)</li> </ul>
Risk assessment	<ul style="list-style-type: none"> <li>• Minimize risk with sweat equity (P2, P10, P13)</li> <li>• Minimize debt through partnering, teaming or strategic alliances (for equipment and facilities) and buy only what is needed (P6, P7)</li> <li>• Risk assessment is ongoing (P2, P9, P12, P13)</li> </ul>

Table IX presents the raw un-coded themes and subtopic containers for the WR (web review) code. The WR code reflects the importance of reviewing the Website from the perspective of the user. First, the Web reviewer should



understand the technology, customer, and the market niche of the EC business to be effective. Second, the review should be scrutinized realistically and objectively. Third, the review should focus on ease of use, speed, purpose, and alignment with customer needs. Finally, customer feedback is critical to a good review.

TABLE IX. WR PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
Choosing a Web reviewer	<ul style="list-style-type: none"> <li>The reviewer must understand the technology, the customer, and the market niche if the review is to be effective (P1, P10, P13)</li> <li>Multiple internal Web reviews should be conducted and evaluated (P10, P13)</li> <li>Seek those who will scrutinize your Website realistically (P1, P10)</li> </ul>
Effectiveness of Website	<ul style="list-style-type: none"> <li>Make sure the product/service is right and customer really wants it (P1, P7, P11)</li> <li>Be willing to accept feedback from biased and unbiased consumers (P3, P12)</li> <li>Consumer suggestions and recommendations (feedback) should be implemented into the site after careful review by the startup team (P1, P10, P13)</li> <li>Make sure to evaluate ease of use, speed, and purpose (P1, P10, P11)</li> </ul>

Table X presents the raw un-coded themes and subtopic containers for the LI (launch and implementation) code. The LI code reflects the importance of working the plan in with the EC process. First, good communication skills and employee relationships can enhance productivity. Second, superior technology and people with excellent technical and business skills enhance productivity and can provide a competitive advantage. Third, constrain expansion to the resources available and limit profit taking. Finally, keep plans simple and aligned with both IT and business objectives.

TABLE X. LI PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
Work plan put into place with the process	<ul style="list-style-type: none"> <li>Keep implementation plans simple and aligned with the plan and process (P10, P13)</li> <li>Continue to manage the natural chasm between business and IT people (P1, P2, P11)</li> <li>Good communication skills and employee relationships can foster success (P13, P14)</li> <li>Use technology as a facilitator of the process (P2, P10, P13)</li> <li>IT updates should follow the EC process (P12)</li> <li>Manage corporate expansion according to sales growth and available corporate resources. (P2, P10, P13)</li> </ul>
Corporate structure	<ul style="list-style-type: none"> <li>Business decisions are significantly influenced by tax considerations (i.e. corporate taxes versus individual taxes) so select a corporate structure that is most advantageous to all parties (P10, P13)</li> <li>An appropriate corporate structure minimizes risk (P10, P13, P15)</li> </ul>
Legal environment	<ul style="list-style-type: none"> <li>Legal expertise could be considered sweat equity and exchanged for stock, minimizing startup costs and legal risks (P10, P13, P15)</li> </ul>

Table XI presents the raw un-coded themes and subtopic containers for the OI (ongoing innovation) code. The OI code

reflects that technology changes at a rapid pace and must thereby be managed accordingly. First, managers need to be prepared for the upheaval caused by IT changes. It is estimated that state-of-the-art changes in IT occur every 18 months. We understand that the global business environment within which EC business operates is in continuous flux, but the technology changes are even more dramatic. Open source applications are being introduced on almost a monthly basis and the major vendors like Oracle and Microsoft are introducing drastically new products sometimes every couple of years. Second, a successful EC business must be conservative with its profit taking scheme and save for this IT upheaval to survive. Third, the team of people that run the EC business must possess expertise in both business and technology to deal with rapid change. Finally, the Website must reflect changes in IT and the marketplace to continue to attract new customers and maintain existing ones.

TABLE XI. OI PROCESS STAGE CODE

Process Stage Subtopic (container)	Raw (un-coded) Themes
IT changes and obsolescence	<ul style="list-style-type: none"> <li>Entrepreneurs can expect an IT state-of-the-art upheaval every eighteen months (P3, P9)</li> <li>Diversification, flexibility and adaptability are critical in managing rapid change (P1, P6)</li> <li>Retain initial profits for future technology growth and obsolescence (P7, P9, P10, P13)</li> <li>Possessing technical, marketing, sales, financial and management expertise internal to the business tend to have an easier time keeping up with IT advances (P6, P10, P11, P13, P15)</li> <li>As IT continues to change and develop apply changes to the business (P3, P10, P13)</li> <li>You never ever finish a web presence or web site because things are continually changing and the web site needs to reflect the ongoing changes (P6, P10)</li> </ul>
Evaluate exit opportunities	<ul style="list-style-type: none"> <li>When appropriate, sell or merge as defined in the long term strategy (P1, P4, P7, P14)</li> </ul>

To enhance the validity of the initial codes, we revisited each respondent to get their feedback. The respondents were enthusiastic with our results because all fifteen agreed that the eleven codes were reasonable. The only criticisms from respondents that kept surfacing from our discussions concerning the initial emergent codes were twofold. First, TD and TM should be merged into a single code because respondents felt that technology development and management are practically inseparable. We heeded their advice and merged the two codes into a new one – technology development and management (TDM) – as suggested by several respondents (P1, P5, P6, P8, P10, P15). The other respondents had no objections to the new code. Second, respondents (P1-P15) felt that KSA is the foundation of any EC startup and should thereby be a prerequisite to an EC process stage model rather than an actual stage in the model.

With the codes complete, the next step was to sequence the codes to form a relevant EC process model. We revisited each of the respondents to get a feel for how the codes should be sequenced. This step was rather intuitive and easy to complete because the stages of the EC process naturally emerged in an ordered sense. That is, we had a pretty good sense from our personal experiences (as researchers and business people) and from respondents what the flow of the stages might be. This is one reason why we presented the codes in sequence in Tables 1-11. With the merging of the TD and TM codes into TDM and

using KSA as an EC process foundation, the finalized and corroborated EC process model is composed of ten stages. The emergent EC process stage model is presented in Figure 1.

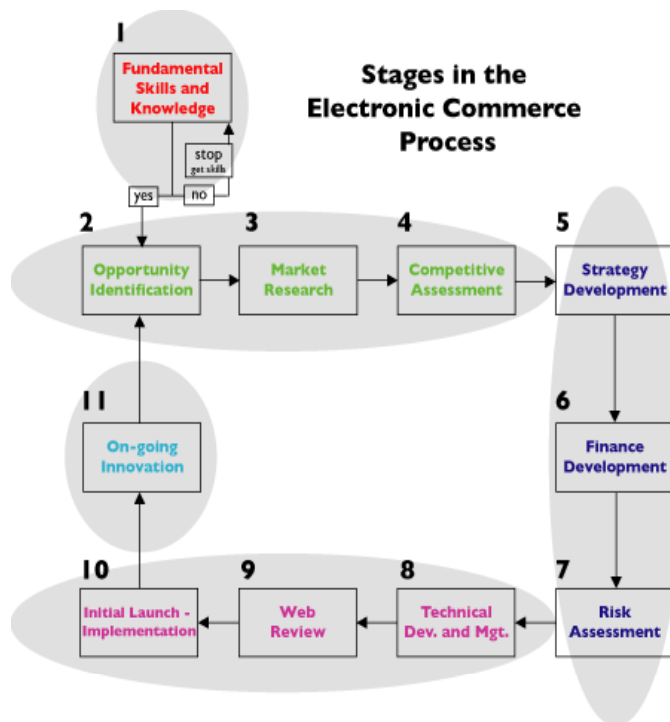


Fig. 1 Emergent EC process stage model

Now that we had created an emergent model (grounded in data), we needed to revisit respondents to determine why the model is valuable and identify interrelationships between the stages of the model. Two themes emerged from the revisit – strategic utilization of the EC process (SP) and process interrelationships (PI). Table XII includes the themes for SP and follows:

TABLE XII. SP THEMES

Code	Themes Supported by Emergent Model
SP	<ul style="list-style-type: none"> <li>Adds structure to combat expected IT upheavals every eighteen months (P1, P3, P9)</li> <li>Supports zero-to-low risk strategy (P10, P13)</li> <li>Encourages use of sweat equity for developing technology before startup, minimizing startup risk in terms of cost, schedule, and performance (P2, P9, P10, P12, P13)</li> <li>Principles and concepts of model suggest average startup cost at \$10,000 (P1, P5, P12)</li> <li>Right model for small business EC entrepreneurs (P1-P15)</li> <li>Past startups intuitively followed the model (even though at the time it was not formally defined or documented) with most experiencing success (P6, P10, P11, P13, P15)</li> <li>Supports three key elements of success as strategy, technical development, and risk minimization (or optimization) (P2, P10, P13)</li> <li>Formally defined model eliminates waste, saves money and resources, minimizes mistakes, lowers risk, helps with schedules, and improves quality of startups (P6, P10, P11, P13, P15)</li> <li>Supports entrepreneur desire for a structured process model (P1, P7, P8, P9)</li> <li>Limited to small and medium size startups (P1, P7, P8, P10, P11)</li> <li>Supports strategic business plan specific enough to guide company to niche markets for which it has technical expertise and competitive advantage (P3, P4, P10, P13, P14)</li> <li>Supports idea that zero-to-low risk approach does not have a universal appeal (and goes contrary to philosophy of many MBA programs), but too many examples where this approach</li> </ul>

	<ul style="list-style-type: none"> <li>has been successful (P2, P12)</li> <li>Supports idea that company should retain initial profits (after a rainy day fund is in place) for future technology growth and obsolescence (P10, P13)</li> <li>Supports idea that zero debt enhances ability of high-tech companies to withstand sudden market downturns (P10, P13)</li> <li>Encourages zero to low risk approach coupled with no debt and well defined rainy day fund (accumulated by postponing profits) because past has shown that many EC companies have withstood major downturns in the high tech markets this way (P10, P13)</li> <li>Guides IT updates implementation (P1, P4)</li> <li>Encompasses idea that EC business with a small number of stockholders to please and a self-imposed constrained corporate buildup (limited to income) can significantly enhance chances for corporate longevity because it eliminates debt (P2, P10, P13)</li> <li>Supports strategic IT thinking that enables market entry at higher levels of technical functionality and superiority; excellent IT people are attracted to sweat equity for ownership, open source is inexpensive and state-of-the-art, and the combination allows streamlined IT that works (P1, P2, P5, P6)</li> <li>No attempt has been made to apply model to large business startups (P1-P15)</li> <li>In the past, when startup entities did not intuitively follow this process (because it was not formally defined) they experienced frustration, mistakes, schedule slippages, performance disappointments and higher than expected costs (P6, P10, P11, P13, P15)</li> <li>Although the study focused on EC entrepreneurs within a 500 mile radius of St George, Utah, the Internet market is worldwide, and therefore these principles have worldwide appeal (P1-P15)</li> </ul>
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Table XII includes the themes that emerged based on the value of the EC process model to facilitate a successful startup business or help an existing one prosper on the Internet. Table XIII includes the themes for PI. This table exhibits the important interrelationships between themes as noted by respondents. Notice that many of these themes are similar to the original themes. Once we created the codes for the model from the original themes obtained from the data, we realized that the themes contained relationship information. Table XIII focuses on these interrelationships.

TABLE XIII. PI THEMES

Code	Interrelationship Themes
PI	<ul style="list-style-type: none"> <li>EC entrepreneurs can expect an IT state-of-the-art upheaval every 18 eighteen months accompanied by sudden downturns in high-tech markets (which are some of the major reasons for the high mortality rate in the high-tech business) (P1, P3, P9)</li> <li>In terms of startup success, strategy, technical development, and risk minimization (or optimization) are the three key elements of the EC Process (P2, P10, P13)</li> <li>Everything in the EC Process relates back to corporate strategy (P2, P10, P13)</li> <li>The 2<sup>nd</sup> most important stage (after strategy) is IT development in terms of superiority, uniqueness, newness, productivity related (automated management systems), external relationships, and quality services that provide competitive advantage (P2, P10, P13)</li> <li>The 3<sup>rd</sup> most important stage (after strategy and IT development) is risk minimization/ optimization (P2, P10, P13)</li> <li>Successful entrepreneurs have passion for their IT and market niche (P1, P2, P3, P5)</li> <li>Entrepreneurs must be well rounded with both business and IT skills (P1, P2, P6)</li> <li>Entrepreneurs who have few fundamental EC IT skills are headed for failure unless they partner with someone or outsource the required expertise and/or experience (P1-P15)</li> <li>Enterprises that have technical, marketing, sales, financial and management expertise internal to the corporation tend to have</li> </ul>

	<p>distinct advantages over those who are lacking in one or more of these skill areas (P6, P10, P11, P13, P15)</p> <ul style="list-style-type: none"> <li>• The corporation should retain initial profits in a rainy day fund (to cover sudden downturns in the market) and a high-tech replacement fund (to cover the technological upheavals) (P10, P13)</li> <li>• Opportunities may be lost because entrepreneurs are unwilling to dedicate the necessary time and resources required for full preliminary evaluation (P15)</li> <li>• The corporate strategic business plan should be specific enough to guide the company to the niche markets for which they have the technical expertise, technical aptitudes, and a competitive advantage (P3, P4, P10, P13, P14)</li> <li>• There is a natural chasm between marketing and technical developers. Corporate executives must understand and manage this chasm carefully and realistically if corporate cost, schedule, and performance needs are to be met (P1, P2, P11)</li> <li>• Technical experts may not understand the marketing side of the business (P1-P15)</li> <li>• Development projects have IT obstacles, challenges, struggles, and problems that make cost, schedule, and performance requirements hard to meet (P1, P10, P11, P13, P15)</li> <li>• Sweat equity allows an entrepreneur to develop and prove IT before startup, minimizing startup risk in terms of cost, schedule, and performance (P2, P9, P10, P12, P13)</li> <li>• Zero debt enables IT companies to withstand sudden market downturns (P10, P13)</li> <li>• With a small number of stockholders to please, a constrained corporate buildup (limited by income) can enhance the chances for longevity because it eliminates debt (P2, P10, P13)</li> <li>• Diversification, flexibility and adaptability are key principles in managing explosive business situations (P13, P15)</li> <li>• If individual are going to contribute to the team, they must have enough knowledge and experience to recognize problems and how they relate to each other (P1, P15)</li> <li>• Team member commitments should be such that the cost, schedule, and performance requirements of the project are met (P2, P15)</li> <li>• Using the principles and concepts of the EC Process it is anticipated that an average startup cost would be about \$10,000 (P12)</li> <li>• Risk assessment is an on-going process and must be considered in each stage of the project. As risks are identified, they must be quantified, tracked, and then mitigated, if the project is to have a low-to-zero risk startup (P10, P13, P15)</li> <li>• The web site reviewer must understand the technology, the customer, and the market niche if the review is to be effective (P1, P10, P13)</li> <li>• Customer or consumer suggestions and recommendations should be implemented into the web site after careful review by the startup team (P1, P10, P13)</li> </ul>
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#### IV. SYNTHESIS AND REFLECTION

Following the tradition of phenomenology, we created a sequenced EC Process model, established the value of the model, and identified interrelationships between model stages. Moreover, our creations were grounded in data obtained from 15 successful EC entrepreneurs. Once created, all of the details of our EC Process model were corroborated by the participants via follow-up interviews. All 15 respondents agreed that the model is a useful tool for helping EC startup businesses become established and endure in a complex, competitive, and cyclical industry. The respondents were also unanimous in their belief that EC entrepreneurs must possess basic IT skills, and IT people must have some understanding of basic business principles for an EC business to survive and prosper.

Most notably, the EC process model was valuable in that it adds needed structure to combat the turbulent and cyclical nature of Internet business. It was also deemed valuable in its support of strategy, IT development, and risk management as key elements of success. Finally, the model emphasizes

strategic business and IT thinking as the basis of securing success through a systematic process. The SP themes reinforced the importance of adopting a guiding and systematic model to help the EC entrepreneur better deal with risk, IT upheaval, strategic decision making, low-to-no capitalization requirements, and conservative spending habits.

In terms of interrelationships between themes, the model guides startup and established EC businesses toward integrative partnerships between executive, marketing, and IT people and promotes a 'team' and 'ownership through sweat equity' paradigm. The PI themes explicitly revealed that IT and business people tend to think differently. However, the structure and knowledge provided by the model help both types of team members understand that they must find ways to work together toward prosperity. The PI themes also revealed that successful EC entrepreneurs must have at least some understanding of Internet technology to be able to deal with IT team members and IT investments. This makes sense because EC business is conducted on the Internet. Doing business on the Internet is different than 'brick and mortar' business in that all processing is done via IT.

In sum, the EC Process Model has real business value, provides a sequence that is systematic and rigorous, and educates EC entrepreneurs about the value of team work (especially between IT and business people). Although following this model doesn't guarantee success, it definitely has helped the respondents that participated in our research be successful in their Internet businesses. The respondents helped us see the importance of strategy, risk minimization, IT savvy, and teamwork to achieve success. Our research helped piece together the knowledge of the 15 respondents into a formal process models that other people may follow. Although each respondent intuitively followed the sequences that our model formalized, they did not explicitly have a picture of the sequence. That is, the respondents had tacit knowledge of a process model that helped them achieve success, but an explicit model was never formed. Our research enabled us to gain a deep understanding of how a successful EC business is started and maintained. It also allowed us to learn about the importance of following a systematic process when conducting business. Finally, we were able to see the importance of strategic thinking in making an EC business successful.

We believe that phenomenology was the proper tradition to guide our research because we actually acquired the understanding necessary to achieve a "lived experience". The researchers were intimately involved with the research and its participants for over five years. We were able to gain their trust through numerous interviews and interactions. Without this trust, we could not have developed our model. With trust however comes responsibility. Since the respondents allowed us into their world, we wanted to deliver a formal strategic model of EC business. We believe that we achieved this goal and the respondents agree.

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